

REMARKS

Claims 34-42, 46, 48, 50, 52-54, 56-64, 68, 70, and 72 are pending in the application.

Claims 16-19, 22-26, and 28-33 have been cancelled without prejudice or disclaimer, as being directed to non-elected subject matter. Applicants reserve the right to present the cancelled subject matter in a co-pending application.

Claims 34, 42, 52, 54, 56, and 64 have been amended solely to expedite the patent application process in accordance with the PTO's Patent Business Goals, 65 Fed. Reg. 54603 (September 8, 2000). Applicants reserve the right to present the cancelled subject matter in a co-pending application. The amendments to the claims are fully supported by the application as originally filed, and do not constitute new matter. Support for amended claims 42, 52, 54, and 64 is found, *inter alia*, on page 5, lines 6-9 of the originally filed specification

Claim 53 has been amended to expedite the patent application process in accordance with the PTO's Patent Business Goals (see above) and to correct typographical errors in the claim. The specification has been amended to correct these same typographical errors. These amendments are fully supported by the application as originally filed, and do not constitute new matter.

Support for amended claim 53 and the amendments to the specification is found, *inter alia*, in SEQ ID NO:1 of the originally filed Sequence Listing for the application and Table 5 shown on page 65, lines 10-13 of the originally filed specification (see below).

It is noted that the amendments to the claims and specification have been depicted in accordance with the format now permitted in accordance with the revisions to 37 C.F.R. §1.121 published in the Notice of Final Rule Making: Changes To Implement Electronic Maintenance of

Official Patent Application Records, 68 Fed. Reg. 38611 (June 30, 2003) (Revised Amendment Practice).

Claim Objections

In the Final Office Action, the Examiner required cancellation of claims 16-19, 22-26, and 28-33, as being directed to non-elected subject matter (Office Action, page 2). Applicants have cancelled claims 16-19, 22-26, and 28-33, 32 in this Amendment, without prejudice or disclaimer (see above). Applicants respectfully request withdrawal of this objection.

35 U.S.C. §102(a) and (b)

Claims 34-38, 41, 42, 46, 48, 50, 52, 53, 54, 56-60, 63, 64, 68, 70, and 72 have been rejected under 35 U.S.C. §102(a) and (b) as being anticipated by GenBank Accession AI126846 (GI: 3595360, 26 October 1998) (Office Action, pages 3-4). The Examiner states:

- Nucleotides 6688-7137 of SEQ ID NO:1 are identical to nucleotides 1-450 of the GenBank sequence (Office Action, page 4);
- The GenBank record reports that the AI126846 nucleic acid was contained in a pT7T3D expression vector with a modified polylinker and that the lab host was ampicillin DH10B cells, a prokaryotic host cell (Office Action, page 3);
- Nucleotides 1-39 of SEQ ID NO: 48 are identical to nucleotides 271-309 of the GenBank record (Office Action, page 3);
- The GenBank record reports an isolated nucleic acid sequence that comprises 40 or more contiguous nucleotides of SEQ ID NO:1 and includes a single nucleotide polymorphism that is a C at position 6991 (Office Action, page 3);
- Nucleotides 1266-1557 of SEQ ID NO:2 are identical to nucleotides 25-316 of the GenBank sequence (Office Action, page 4); and
- GenBank record reports that the AI126846 nucleic acid was contained in a pT7T3D expression vector with a modified polylinker and that the lab host was ampicillin DH10B cells, a prokaryotic host cell (Office Action, page 3).

Applicants respectfully traverse this rejection. Claims 34, 42, 52-54, 56, and 64 have been amended to expedite the patent application process (see above). As currently amended, claims 34, 42, 52-54, 56, and 64 read:

34. An isolated nucleic acid molecule comprising a nucleotide sequence selected from the group consisting of:

- (a) SEQ ID NO:1;
- (b) a complement of SEQ ID NO:1;
- (c) a nucleotide sequence comprising 500 or more contiguous nucleotides of SEQ ID NO:1; and
- (d) a complement of (e).

42. Isolated DNA or RNA comprising 500 or more contiguous nucleotides of:

- (a) SEQ ID NO:1; or
- (b) a complement of SEQ ID NO:1.

52. An isolated polynucleotide comprising a nucleotide sequence selected from the group consisting of:

- (a) SEQ ID NO:46, SEQ ID NO:47, SEQ ID NO:48, and SEQ ID NO:49;
- (b) a complement of (a);
- (c) a nucleotide sequence comprising at least 25 contiguous nucleotides of any one of SEQ ID NO:50 and SEQ ID NO:51; and
- (d) a complement of (c).

53. An isolated nucleic acid molecule which comprises 40 or more contiguous nucleotides of SEQ ID NO:1 and includes at least one single nucleotide polymorphism selected from the group consisting of:

- (a) an A at position 6674;
- (b) a G at position 6674;
- (c) a T at position 6976;
- (d) a C at position 3161; and
- (e) a T at position 3161.

54. An isolated nucleic acid fragment of BAC RP11-0702C13 which comprises 500 or more contiguous nucleotides of SEQ ID NO:1.

56. An isolated nucleic acid molecule comprising a nucleotide sequence selected from the group consisting of:

- (a) SEQ ID NO:2;

- (b) a nucleotide sequence encoding amino acid sequence SEQ ID NO:3;
 - (c) a complement of SEQ ID NO:2;
 - (d) a nucleotide sequence comprising 500 or more contiguous nucleotides of SEQ ID NO:2;
 - (e) a complement of (f); and
 - (f) a nucleotide sequence which encodes 100 or more consecutive amino acids of SEQ ID NO:3.
64. Isolated DNA or RNA comprising 500 or more contiguous nucleotides of:
- (a) SEQ ID NO:2; or
 - (b) a complement of SEQ ID NO:2.

It is believed that the amendments obviate this ground of rejection for claims 34, 42, 52-54, 56, and 64, and dependent claims 35-38, 41, 46, 48, 50, 57-60, 63, 68, 70, and 72. Applicants respectfully request withdrawal of this rejection, and reconsideration of the rejected claims.

35 U.S.C. §103(a)

Claims 39, 40, 61, and 62 have been rejected under 35 U.S.C. §103(a) as being unpatentable over GenBank Accession AI126846 (GI: 3595360, 26 October 1998) in view of Laskey et al., U.S. Patent No. 5,304,640 (Office Action, page 4). The Examiner states that the GenBank record shows that nucleotides 6688-7137 of SEQ ID NO:1 are identical to nucleotides 1-450 of the GenBank sequence (Office Action, page 4). In addition, the Examiner states that nucleotides 1266-1557 of SEQ ID NO:2 are identical to nucleotides 25-316 of the GenBank sequence (Office Action, page 4).

According to the Examiner, the GenBank record reports that the AI126846 nucleic acid was contained in a pT7T3D expression vector with a modified polylinker and that the lab host was ampicillin DH10B cells, a prokaryotic host cell (Office Action, page 4-5). The Examiner

considers that one of ordinary skill in the art at the time the invention was made would have been motivated to create such host cells for the benefit of expressing the polypeptide encoded by the nucleic acid taught by the GenBank record in order to characterize and study the polypeptide (Office Action, page 5).

Applicants respectfully traverse this rejection. As indicated above, claims 34 and 56 have been amended to expedite the patent application process. Amended claims 34 and 56 read:

34. An isolated nucleic acid molecule comprising a nucleotide sequence selected from the group consisting of:

- (a) SEQ ID NO:1;
- (b) a complement of SEQ ID NO:1;
- (c) a nucleotide sequence comprising 500 or more contiguous nucleotides of SEQ ID NO:1; and
- (d) a complement of (e).

56. An isolated nucleic acid molecule comprising a nucleotide sequence selected from the group consisting of:

- (a) SEQ ID NO:2;
- (b) a nucleotide sequence encoding amino acid sequence SEQ ID NO:3;
- (c) a complement of SEQ ID NO:2;
- (d) a nucleotide sequence comprising 500 or more contiguous nucleotides of SEQ ID NO:2;
- (e) a complement of (f); and
- (f) a nucleotide sequence which encodes 100 or more consecutive amino acids of SEQ ID NO:3.

It is believed that the amendments to claims 34 and 56 obviate this ground of rejection for dependent claims 39, 40, 61, and 62. Applicants respectfully request withdrawal of this rejection, and reconsideration of the rejected claims.

Correction of Claim 53 and Table 5

Claim 53 and Table 5 of the application have been amended to correct typographical

errors made in designating the locations of the SNPs of the application. In claim 53 and Table 5, the SNP locations were erroneously designated at nucleotide positions 6684, 6991, and 3176 of SEQ ID NO:1. The correct SNP locations are actually found at nucleotide positions 6674, 6976, and 3161 of SEQ ID NO:1.

The amendments to correct the nucleotide positions of SNP locations are fully supported by, *inter alia*, the sequence set forth as SEQ ID NO:1 in the originally filed Sequence Listing for the application; the sequences set forth in columns 2-3 of Table 5 on page 65, lines 10-12 of the originally filed specification; and the disclosure on page 65, lines 13-15 of the originally filed specification.

As shown in the Appendix attached hereto, a sequence comparison of the sequences set forth in columns 2-3 of original Table 5 with the sequence of original SEQ ID NO:1 indicates that the SNPs are properly located at positions 6674, 6976, and 3161 of SEQ ID NO:1. Thus, the amendments to the claim 53 and Table 5 are fully supported by the application as originally filed, and do not constitute new matter.

CONCLUSION

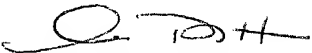
Applicants believe that the claims of the subject application are in condition for allowance. An action passing this case to issue is courteously urged. In the event that the Examiner is of the opinion that further discussion of the application would be helpful, the Examiner is hereby respectfully requested to telephone the Applicants' undersigned representative at (212) 415-8742 and is assured of full cooperation in an effort to advance the prosecution of the instant application and claims to allowance.

AUTHORIZATION

The Commissioner is hereby authorized to charge any additional fees which may be required for the timely consideration of this amendment under 37 C.F.R. §§ 1.16 and 1.17, or credit any overpayment to Deposit Account No. 13-4500, Order No. 2976-4037. A DUPLICATE COPY OF THIS SHEET IS ATTACHED.

Respectfully submitted,
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APPENDIX

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TABLE 5 SEQUENCES

Reference Sequence	PMP
ACTACAGGTTTGCACCACC <u>A</u> TGTCCTGCTAATTTTTTTTTT	A>G
TGTGCACTCTTGGGCATAC <u>G</u> GCCTAGGAGTGGAAGTCTGTG	C>T
GGGCTCTGCGCCACCTCAAC <u>C</u> CAGGCGTTTGTTCGCGAG	C>T

COMPARISON OF TABLE 5 SEQUENCES AND SEQ ID NO:1

<400> 1						
cgggcggtgta	tatctcttca	tagagagcgc	tcagacagcg	tgcgttaatc	tgcgtcgata	60
tatagagatc	tttatcactg	agtagataga	acgtacatga	atgtacgaac	agtccagacg	120
agtaacttga	ctaggataag	atagacagta	ccaactaatg	agacaagaag	agggaaatcat	180
atagaatcat	gtagtctgag	tctagcgagt	gtcgacatga	tcacaagcga	aatacagact	240
atgagaagag	gtagaaataa	taagtanact	gagaagagag	gtcatatgta	catacaaadc	300
agtaaagcaa	tagaaattga	atacattata	agccacagtt	acagaattag	cctaattttaa	360
caaccatggc	aagcgagtta	tatcaaacat	agaagagtaa	actctatcga	ccatgggtag	420
gaacgaataa	aggcgtcgag	aagacaataa	gaatgcgtgt	taaacagcaa	tacaagagaa	480
tagcaccact	gaagcagacc	aaaggcgtca	ccggggaagt	aggggaagagg	cacctcacia	540
ggagaggaaa	gggcagtcct	gattttgaaa	atttcagtga	aaagacagtg	ttgttccccg	600
aggcagctta	gtgatcccg	atcgactctg	aagaggaccc	tgagggtagg	ggatttttgg	660
gcctgaccgg	cctatgctga	acgcccaccg	ggaattcagg	gagaaacacg	gggccccggc	720
ttccaggaga	gcagccaggg	cacagccctg	aggacgggca	aaccccaccc	aggcacggtg	780
agagggaggg	cgcccaggcc	tggggcctgg	cggcagggga	tgaagtggac	cagagccccg	840
caaatcctaa	cgtgggtgag	cagtgagcct	gtgtggctgc	gagtggctcc	gttttggggc	900
tgtttgttcc	tgcagcaaat	gatgccagcc	ctgacggaac	cagtgcacgt	ccaccacgag	960
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gctgcccacg	tcctctccag	gaggggacac	cggttccatg	agctgcccac	gccctttcca	1140
ggaagggacc	ccgggttcac	gagctgccc	cgctctctcc	aggaggggac	accgggttca	1200
cgagctgccc	acgtcctctc	caggaaggga	cccaggteca	cgaactgccc	acgccctctc	1260
caggagggga	cccgggtcca	cgagctgccc	acgtcgtctc	caggaaggga	cccgggtcca	1320
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cacgagctgc	ccacgtcctc	tcaggaaggg	gaccccggtt	tcacgagctg	cccacgtcct	1500
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APPENDIX

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cagtgcatac	gctcaccgcc	tggccgctca	ggagcctgtg	cttgaccccc	aaatccgcc	3000
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ccctcgectg	agccccctca	<u>gggctctgcg</u>	<u>ccacctcaac</u>	<u>Ccaggcggtt</u>	<u>gttccgcagg</u>	3180

GGGCTCTGCGCCACCTCAACCCAGGCGTTTGTTCGCGAG

C>T

CORRECT SNP
POSITION: 3161

aacctcccgg	ctcttcccac	tcgggaaaagg	aaggctctgg	gcatggaggt	cggccaggcc	3240
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APPENDIX

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ttctgcctct	gggtttcaag	tgattctcct	gccttagcct	cccaagtagc	tgggactaca	6660
ggttttgcacc	accAtgtcct	gctaattttt	ttttttttgt	atttttaata	gagacagggt	6720

ACTACAGGTTTGCACCACCAATGTCCTGCTAATTTTTTTTT	A>G
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CORRECT SNP
POSITION: 6674

ttctcctcat	tggccaggct	ggtctcgaac	tcctgacctc	agacgatcca	cctgcctcag	6780
cctcccgaag	tggtgggatt	acaggcacga	gccactgtgc	ccggccatca	ttccttttta	6840
ctgctgacta	atagtctgct	gtgtgaatcc	accgctagaa	accactcat	cagttgatgg	6900
tcatgtgggt	tgcttctgct	attcgcttat	tatgaacagt	gctggaataa	acgttcctgt	6960
gcactcctgg	gcataCgcct	aggagtggaa	ctgctgggtc	aaatggtgac	tttacgttta	7020

TGTGCACTCTTGGGCATAGCCTAGGAGTGGAAGTCTG	C>T
---------------------------------------	-----

CORRECT SNP
POSITION: 6976

acgtttctgag	gagccgccag	gcgttttaac	acagtgactg	caccattttca	cattcctgcc	7080
aacaatgtgt	gagaattcca	atttctctac	atcccccaaca	ttttccttta	aaaaaaagaa	7140
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APPENDIX

- iv -

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